

EXHIBIT C

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the United States Patent Application of :

Applicants: Christian Kropf, :
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 Rolf Hempelmann and :
 Marcel Roth :

Application Serial No. 09/868,379	:	Examiner:	Lezah Roberts
Filing Date: 08/15/2001	:	Art Unit:	1612
Confirmation No. 8884	:		
Continuation of International Application	:		
PCT/EP99/09683, filed 12/09/1999	:		
Claiming German priority of	:		
Application No. 198 53 662.0, filed 12/18/1998	:		
	:		

Title: FINE SUSPENSIONS OF POORLY SOLUBLE CALCIUM SALTS AND THEIR USE IN DENTAL CARE PRODUCTS

FIFTH DECLARATION OF CHRISTIAN KROPF

I, Christian Kropf, declare as follows:

1. I am an inventor of United States Patent Application No. 09/868,379.

2. I am the head of a group in Laundry and Homecare Global Research Chemistry at Henkel AG & Co. KGaA, Henkelstrasse 67, 40589 Düsseldorf, Germany. I obtained both a diploma degree in Chemistry in 1992 and a Ph.D. degree in Engineering Sciences (new materials) in 1998 from Saarland University in Saarbruecken, Germany.

3. I am familiar with United States Patent Application No. 09/868,379 of Christian Kropf et al., United States Patent Application No. 11/864,252 of Christian Kropf et al., and United States Patent No. 5,560,932 to Bagchi et al.

4. United States Patent Application No. 11/864,252 includes a TEM micrograph of a composite according to the invention, comprising hydroxylapatite and Type A gelatine. (A copy of the TEM micrograph is attached hereto as EXHIBIT 1). According to Paragraph [0021] of the Kropf '252 application, "[T]he three-dimensional structure of the composite materials according to the invention of a protein component and the poorly soluble nanoparticulate calcium salt is illustrated by way of example by the TEM micrograph in Figure 1 of a composite material of hydroxylapatite and Type A gelatine (magnification 200,000 x; 1 cm. in Fig. 1 corresponds to 40 nm)."

5. Processes according to the invention are generally described in Paragraphs [0044] – [0048] of the Kropf '252 application. Paragraph [0044] describes the process as follows:

The composite materials according to the invention are prepared by precipitation reactions from aqueous solutions of water-soluble calcium salts and aqueous solutions of water-soluble phosphate and/or fluoride salts, the precipitation being carried out in the presence of protein components. This is preferably done by adding the protein components in pure, dissolved or colloidal form to the alkaline aqueous phosphate and/or fluoride salt solution or to the alkaline solution of the calcium salt before the precipitation reaction. Alternatively, the protein components may be initially introduced in pure, dissolved or colloidal form followed by addition of the alkaline calcium salt solution and the alkaline phosphate and/or fluoride salt solution either successively in any order or at the same time.

6. The process disclosed in Paragraph [0044] of the Kropf '252 application comes within the process set forth in all of Applicants' claims. Paragraphs [0045] - [0048] disclose variants of the process disclosed in Paragraph [0044] that also come within the process claimed in all of Applicants' claims. See also Paragraph [0027], which discloses that "gelatine [is] preferred [protein] for the purposes of invention" and Example 2.1 (Paragraph [0071]), which employs as the protein, gelatin.

7. Paragraph [0021] of the Kropf '252 application also discloses that "[T]he way in which the inorganic particles are attached to the basic skeleton of the protein component [*i.e.*, the gelatin] is determined by the primary structure (amino acid sequence) and — depending on the nature of the protein component — by its secondary, tertiary and quaternary structure. It has surprisingly been found that the spatial distribution and the quantitative extent of the attachment of the inorganic nanoparticles to the protein component can be influenced by the type and quantity of the amino acids present in the protein component, and hence by the choice of the protein components."

8. In Applicants' claimed suspension the claimed particles comprise the inorganic nanoparticles attached to the basic skeleton of the gelatin, *i.e.*, the colloid, to form a single entity that is linked together. Applicants' claimed colloid is both adsorbed onto and modifies the particles as now set forth in the claims. In contrast to Applicants' claimed particles which are "attached to," *i.e.*, bonded to the colloid, the Bagchi et al. particles and colloid must be essentially free of chemical links.

9. As noted in Paragraph [0021] of the Kropf '252 application, Applicants' claimed particles, which are attached to the colloid, form a single structure, whereas the particles disclosed in Bagchi et al. do not because the particles and surface modifier are free of chemical links.

10. As noted in Paragraph [0021] of the Kropf '252 application, Applicants' claimed inorganic nanoparticles reproduce the three-dimensional structure of the gelatin, *i.e.*, the colloid. Hence, Applicants' claimed product is different in both composition and structure from the Bagchi et al. product.

11. As noted in Paragraph [0023] of the Kropf '252 application, the structured composite materials produced according to Applicants' claimed process lead to a particularly effective biomineralization process.

12. As noted in Paragraph [0035] of the Kropf '252 application, the structure of the composite materials and the charging of the protein component with the nanoparticulate calcium salt can be influenced by surface modification. In this way, it is possible where the composite materials are used in remineralization processes to influence both the course and the speed of the remineralization process.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the Kropf application or any patent issued thereon.

Dated: November 18, 2009


CHRISTIAN KROPF

EXHIBIT 1

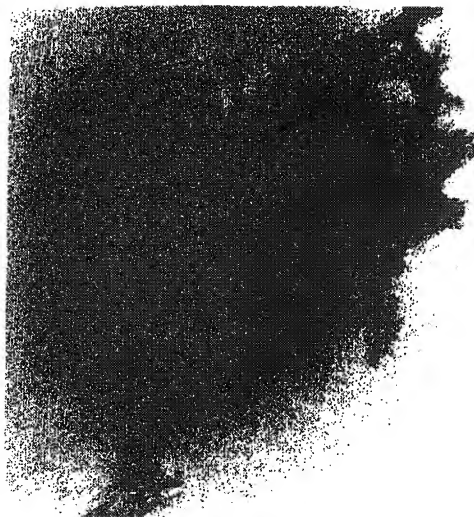


FIG. 1